BITT POLYTECHNIC

Getlatu, Ranchi

Assignment Questions

Branch: Electronics & Communication Engineering Semester: 4th

Subject: Computer Hardware & Peripheral Assignment No: 01

D/S Your class is suspended due to Corona Virus till 15th April 2020 but u are in regular studies in 4th sem. so I am giving the assignment for do seriously and u have to do given assignment and submission date is 16th April 2020.

Assignment for Computer Hardware & Peripherals:

1. Explain about the Definite State Machine.
2. Explain about the Instructions Set Architecture.
3. Explain about the different types of Addressing Modes with Example.

Otherwise marks will deduct in Internal.

Thanks.

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Getlatu, Ranchi Assignment

Questions

Branch: Electronics & Communication Engineering Semester: 4th

Subject: **Communication System** Assignment No: 01

1. Explain briefly the Representation of Band Limited Process.
2. Explain briefly the Representation of Band Pass Process.
3. Write the Short notes on
   a) Noise temperature b) Noise bandwidth
   c) Effective input noise temperature d) Noise figure
4. What are the Noise Sources and its Classification
5. Explain the Frequency translation
6. Explain the Single Tone Modulation with expressions .
7. Explain the Recovery of base band signal
8. Explain the Noise figure & equivalent noise temperature in cascaded circuits.

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Assignment Questions

Branch: Electronics & Communication Engineering Semester: 4th

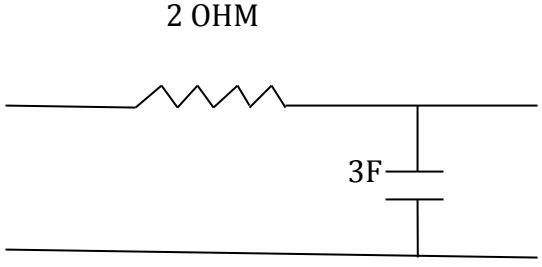
Subject: Control systems Assignment No: 01

OBJECTIVE QUESTION

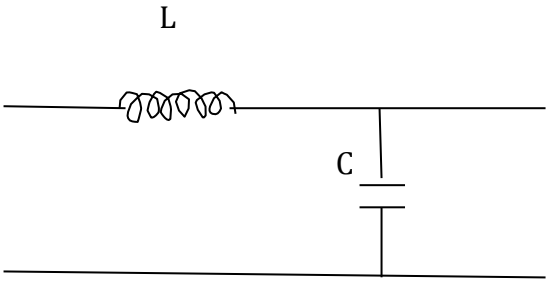
1. Laplace transform of 4 t is……
2. Laplace transform of t^4 is ……
3. Laplace transform of sin3t is……
4. Laplace transform of cos7t is……
5. Inductance opposes …… (ac/dc) current.
6. Impedance across inductance is ……..(SL/SC)
7. Impedance across capacitor is ……..(SC or 1/SC)
8. Define pole of transfer function
9. Define zero of transfer function
10. Find the Laplace transform of e^{-t}.
11. Find the Laplace transform of 2t
12. Find the Laplace transform of $3e^{-t}$.
13. Find the Laplace Inverse transform of $\frac{S}{(S^2 + a^2)}$

SHORT QUESTION

1. Define transfer function.
2. 2. Find transfer function of :



3. Find transfer function of :



4. Find inverse laplace transform of $\frac{S}{(S-3)(S-4)}$

5. Define block diagram. Explain two block diagram reduction technique.

6. What is control system? Explain open loop and closed loop control system with diagram.

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Assignment Questions

Branch: Electronics & Communication Engineering Semester: 4th

Subject: Data Communication & Computer Networking Assignment No: 01

Answer all questions:

1. If a periodic signal is decomposed into six signal with frequencies of 150, 200, 300, 450, 500 and 650 Hz, calculate its bandwidth? Draw the spectrum, assuming the frequencies of 150, 300 and 450 Hz have amplitude of 10 V and res frequencies are of 15 V.
2. Define the following terms: i) Baseband signal ii) Bandpass signal iii) Baseband transmission iv) Bandpass transmission v) Bit rate vi) Bandwidth vii) Baud rate viii) Throughput ix) Latency x) Jitter
3. List the techniques of converting: i) Digital data to digital signal
   ii) Analog signal to digital signal
   iii) Analog signal to analog signal
   iv) Digital signal to analog signal
4. Draw the graph of: i) NRZ Polar ii) RZ Polar iii) NRZ Bipolar iii) RZ Bipolar iv) AMI for the following digital data: a) 01101011 b) 10110011 c) 0101101 d) 10011001
5. Define and explain the sampling theorem.
6. Explain the PCM technique.
7. Define and explain amplitude modulation.
8. Explain frequency and phase modulation.
9. Define and explain ASK, FSK and PSK.
10. Define multiplexing technique. Explain Frequency division multiplexing (FDM).

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Assignment Questions

Branch: Electronics & Communication Engineering Semester: 4th

Subject: **DIGITAL TECHNOLOGY AND MICROPROCESSOR** Assignment No: 01

Questions Type -1

1. **In Boolean algebra, the Buffer is equivalent to ……..**

a) OR in series with OR operation
b) AND in series with AND operation
c) NOT in series with NOT operation
d) None of the above

2. In Boolean algebra, the bar sign (-) indicates ……..

a) OR operation
b) AND operation
c) NOT operation
d) None of the above

3. **The NOR gate is OR gate followed by ……**

a) AND gate
b) NAND gate
c) NOT gate
d) None of the above

4. For the K map in the given figure the simplified Boolean expression is ……

CD / AB	00	01	11	10
00	1			1
01		1	1	
11		1	1	
10	1			1

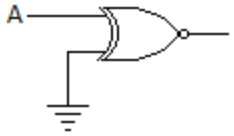
a) B’.D+B.D
b) B.D’+B.D
c) B’.D’+B.D
d) B’.D’+B.D’

5. **The universal gate is ……**
   a) NAND gate
   b) OR gate
   c) AND gate
   d) None of the above

6. **The inverter is ……**
   a) NOT gate
   b) OR gate
   c) AND gate
   d) None of the above

7. **Both OR and AND gates can have only two inputs.**
   a) True
   b) False

8. **For the gate in the given figure the output will be ……..**



   a) 0
   b) 1
   c) A
   d) $\bar{A}$

9. **The type of prime implecants which can be removed from the prime implecants ……..**
   a) E.P.I
   b) P.I
   c) R.P.I
   d) None of the above

10. **The type of code used for adjacent cell coding in K-map method……..**
   a) Binary code
   b) Gray code
   c) HexaDecimal code
   d) Octa code

Questions Type -2

1. Prove that AB+BC+B'C=AB+C and also prove with the help of truth table.
2. State Demorgan's Theorem and prove the statement using Boolean algebra and also with the help of truth table.
3. Define the NAND and NOR gate with their truth table.
4. Compare positive and negative logics.
5. Convert the following :
   a. $(10111)_2 = (\ )_{16}$
   b. $(1110011)_2 = (\ )_8$
   c. $(1010111110111111)_2 = (\ )_{16}$
   d. $((111010101000)_2 = (\ )_8$
6. Simplify using K- map method and also draw logic circuit diagram.
   a. $F(ABCD) = \Sigma (0, 3,4, 6, 8, 10,11,12, 15)$
   b. $F(ABCD) = \Sigma (0, 5, 6,7, 8, 10, 15)$
   c. $F(ABCD) = \Sigma (1, 3,5,7,9, 11,13, 15)+d(5,7,13,15)$
   d. $F(ABCD) = \Sigma (0, 4, 6, 8, 10, 15)+d(1,3,5,9)$
   e. $F(ABCD)= \Pi (0, 5, 6,7, 8, 10, 15)$
   f. $F(ABCD)= \Pi (1,3,4, 5, 6,7, 8, 10,11,13,12\ 15)$

7. Simplify using Tabular method.
   a. $F(ABCD) = \Sigma (0, 3,4, 6, 8, 10,11,12, 15)$
   b. $F(ABCD) = \Sigma (0, 5, 6,,7, 8, 10, 15)$
   c. $F(ABCD) = \Sigma (1, 3,5,7,9, 11,13, 15)+d(5,7,13,15)$
   d. $F(ABCD) = \Sigma (0, 4, 6, 8, 10, 15)+d(1,3,5,9)$

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